

## **ABSTRACT OF THE DISCLOSURE**

A computer system may include multiple processing nodes, one or more of which  
5 may be coupled to separate memories which may form a distributed memory system.  
The processing nodes may include caches, and the computer system may maintain  
coherency between the caches and the distributed memory system. Particularly, the  
computer system may implement a flexible probe command/response routing scheme.  
The scheme may employ an indication within the probe command which identifies a  
10 receiving node to receive the probe responses. For example, probe commands indicating  
that the target or the source of transaction should receive probe responses corresponding  
to the transaction may be included. Probe commands may specify the source of the  
transaction as the receiving node for read transactions (such that dirty data is delivered to  
the source node from the node storing the dirty data). On the other hand, for write  
15 transactions (in which data is being updated in memory at the target node of the  
transaction), the probe commands may specify the target of the transaction as the  
receiving node. In this manner, the target may determine when to commit the write data  
to memory and may receive any dirty data to be merged with the write data.